

DEPARTMENT OF FISH AND GAME

SACRAMENTO VALLEY AND CENTRAL SIERRA
1701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CALIFORNIA 95670
Telephone (916) 358-2900



February 16, 2001

Mr. Henry M. Ramirez, Chief
Project Power Planning Branch
State Water Project Analysis Office
Department of Water Resources
1416 Ninth Street
Post Office Box 942836
Sacramento, California 95814

Dear Mr. Ramirez:

Oroville Project (Feather River Project) No. 2100

As requested by the Department of Water Resource at the December 7, 2000 meeting of the Environmental Work Group, the California Department of Fish and Game formally submits our concerns and a directory of our authorities relative to the relicensing of the Oroville Project, FERC No. 2100 (enclosed).

Thank you for soliciting our concerns. If you have questions about the above, please contact Mr. Mike Mainz, Environmental Services IV, at (916) 358-2853 or mmeinz@dfg.ca.gov.

Sincerely,

Larry L. Eng, Ph.D.
Assistant Regional Manager
Fisheries, Wildlife and Environmental Programs

Enclosures

cc: Mr. Mike Mainz
Department of Fish and Game
1701 Nimbus Road, Suite A
Rancho Cordova, California 95670

Mr. Ranirez
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Mr. David Boergers, Secretary
Federal Energy Regulatory Commission
888 First Street N. E.
Washington D. C. 20426

California Department of Fish and Game
Relicensing Concerns - Oroville Project
FERC No. 2100

The California Department of Fish and Game (DFG) have identified several broad areas of concern relative to the Relicensing of the Oroville Project. Those concerns are directed toward the protection of public trust resources associated with Lake Oroville, with the Feather River downstream of Lake Oroville, and include the operation of the Feather River Mitigation Hatchery and management of the Oroville Wildlife Area.

DFG respectfully requests that the California Department of Water Resources (DWR) application to the Federal Energy Regulatory Commission (FERC) for relicensing of the Oroville Project address the areas of concern outlined below. Our request is made under provisions of the Federal Power Act [Sections 10(a) and 100], the Federal Fish and Wildlife Coordinate Act, and Section 21000 [Title 14] of the California Public Resources Code. Section 21000 designates DFG trustee for California's fish and wildlife resources and gives DFG jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species.

Our areas of concern include but may not be limited to the following:

Reservoir Surface Level Fluctuation

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| ● Are the project related Lake Oroville water level fluctuations presently affecting the reproduction and survival of warmwater sportfish? |] | S-03a-01 |
| ● How will the project related Lake Oroville water level fluctuations affect the reproduction and survival of warmwater sportfish under future operational demands? |] | S-03a-02 |
| ● Is the present minimum pool adequate for protecting the Lake Oroville cold- water sport fishery? |] | S-03a-03 |

Water Temperature

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| ● Are the existing temperature requirements defined under the State Water Projects Feather River Flow Constraints being met and are they adequately protecting steelhead and fall, late-fall, and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay outlet? |] | S-03a-04a |
| |] | S-03a-04b |

- Is the availability of a cold-water pool in Lake Oroville adequate under present and future operational demands to meet the existing downstream present and future operational demands to cold freshwater habitat requirements of steelhead and fall, late-fall, and spring-run Chinook salmon?

S-03a-05

- Are the existing temperature requirements defined under the State Water Projects Feather River Flow Constraints adequate for the operation of the Feather River Hatchery?

S-03a-06

- Is the availability of a cold-water pool in Lake Oroville adequate under present and future operational demands to meet the cold-water requirements defined under the State Water Projects Feather River Flow Constraints for the Feather River Hatchery?

S-03a-07

- Does the existing Temperature Control Device (TCD) in Lake Oroville provide adequate access to the cold-water pool during below normal water or drier years?

S-03a-08

- Will the existing TCD in Lake Oroville provide adequate access to the cold- water pool under future operational demands particularly during a series of dry and critically dry years?

S-03a-09

- Does the present temperature model have the ability to forecast average daily water temperatures, under present and future operational demands, in the low flow channel and in the river from the Thermalito Afterbay outlet down to Vernona?

S-03a-10

- How does the Feather River Hatchery requirement for warmer water in the summer impact river water temperatures required for holding or rearing of steelhead and spring-run Chinook salmon in the low-flow section? That is, should the hatchery water come directly from Lake Oroville rather than from the river at the Fish Barrier Dam in order that both hatchery and river temperature needs can be satisfied?

S-03a-11

- How does the pump-back operation during the summer months affect water temperatures required for holding and rearing of steelhead and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay?

S-03a-12

- Does the increase in river water temperature that results from warmer Thermalito Afterbay releases during the spring, summer, and fall months limit the amount of suitable steelhead and salmon habitat in the river downstream of Thermalito Afterbay?

S-03a-13

- Does the increase in river water temperature that results from warmer Thermalito Afterbay releases during the spring and early summer months affect survival of Salmonid species outmigrating from the Yuba River?

S-03a-14

Water Quality

- Are Dissolved Oxygen levels in the Feather River from Thermalito Afterbay to Live Oak a problem during the spring, summer and fall months?

S-03a-15

Fisheries Habitat Stream flow

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| <ul style="list-style-type: none">● Are the present stream flows defined under the State Water Projects Feather River Flow Constraints being met and are they adequately protecting steelhead and fall, late-fall, and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay for migrating, holding, spawning, and rearing of steelhead and fall, late-fall, and spring-run Chinook salmon? | } | S-03a-16 |
| <ul style="list-style-type: none">● Is additional Physical Habitat Simulations modeling (PHABSIM) necessary to determine what stream flows are necessary for spawning and rearing steelhead and fall, late-fall, and spring-run Chinook salmon in the low-flow section and in the river downstream of Thermalito Afterbay? | } | S-03a-17 |
| <ul style="list-style-type: none">● Is riparian vegetative cover in the low-flow section and in the river downstream of Thermalito Afterbay adequate under present flow conditions for rearing steelhead and fall, late-fall, and spring-run Chinook salmon? | } | S-03a-18 |

Fluvial Geomorphology

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| <ul style="list-style-type: none">● Are the present flow requirements defined under the State Water Projects Feather River Flow Constraints adequate for maintaining natural fluvial river functions in the low-flow section and in the river downstream of Thermalito Afterbay (i.e., diversity of habitats: pool to riffle ratios, pool depth, stream bank angle, stream bank stability, stream bank vegetative cover, bedload deposition pattern, and stream bank vegetation root depth verses stream bank height above bankful height). | } | S-03a-19 |
| <ul style="list-style-type: none">● Under existing conditions, does the diversity and abundance of benthic macroinvertebrates in the low-flow section and in the river downstream of Thermalito Afterbay suggest a healthy stream channel? | } | S-03a-20 |
| <ul style="list-style-type: none">● Under existing conditions, are there adequate amounts of suitable gravel for Salmonid spawning in the low-flow section and in the river downstream of Thermalito Afterbay? | } | S-03a-21 |
| <ul style="list-style-type: none">● Under existing conditions, are bankful flows frequent enough to maintain channel morphology, sediment transport, habitat diversity and adequate gravels for Salmonid spawning and rearing in the low-flow section and in the river downstream of Thermalito Afterbay? | } | S-03a-22 |
| <ul style="list-style-type: none">● Under existing conditions, are the moderate winter floods and bankful flows adequately recruiting the amount of Large Woody Debris needed to maintain adequate Salmonid rearing habitat in the low-flow section and in the river downstream of Thermalito Afterbay? | } | S-03a-23 |
| <ul style="list-style-type: none">● How will the future demand for project water change the timing and duration of moderate winter floods and bankful flows in the low-flow section and in the river downstream of Thermalito Afterbay? | } | S-03a-24 |

Ramping and Fluctuation in River Flow

- Are the present project related flow ramping/fluctuation restraints adequately protecting rearing Salmonid species from being stranded in the low-flow section and in the river downstream of Thermalito Afterbay?

S-03a-25

- Are the present project related flow ramping/fluctuation restraints adequately protecting Salmonid redds and spawning gravel from being scoured out from the low-flow section and from the river downstream of Thermalito Afterbay?

S-03a-26

Introgression of Fall and Spring-run Chinook Salmon

- What engineering or other reasonable and prudent solutions are available that would prevent the interbreeding of fall and spring-run Chinook salmon in the low flow section of the Feather River (migration barrier and/or flow and temperature changes in low flow section)?

S-03a-27

Fish Diseases

- Would a fish screen(s) on the pump-back operation prevent Infectious Hemopoatic Necrosis (IHN) and other diseases specific to Salmonid species from spreading and becoming permanently established in Lake Oroville? IHN, if permanently established in Lake Oroville, would affect survival of hatchery and river spawned Salmonid species.

S-03a-28

Oroville Wildlife Area

- Are additional funds are needed to augment the existing budget of the Oroville Wildlife Area? Presently available Fish and Game funds are being dedicated to managing people and not wildlife habitat.
- Are additional funds are needed for law enforcement? Presently 2/3's of all the local game warden activities are spent on the Oroville wildlife Area. An augmentation of funding for more wardens would free up time for other law enforcement activities outside of the wildlife area.

S-03a-29

S-03a-30

Endangered Species

- Have adequate surveys been completed to determine what state or federally listed species (plant and animal) are potentially being impacted by project operations?

S-03a-31

Fish and Wildlife related Recreation

- Has DWR completed or met all its obligations for recreation mitigation (wildlife habitat and fishing) under the existing FERC license?

S-03a-32